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1. Iron Teams with Oil to Enrich Venezuela
2. Imagination Sparks South Carolina's Growth
3. Gold Coast Approaches Independence
4. Big Cats Prowl Shrinking Wilds of U. S.
5. The Pitcairn Story Continues to Grow

Jaguar Cools off in the Old Swimming Hole—Unlike most cats (Bulletin No. 4), wild or tame, the jaguar takes to water like a duck, a taste he shares only with Cousin Tiger. This one, surprised in his tub by a fearless hunter, roams Brazil's Mato Grosso jungle with much more freedom than his brothers enjoy in the dwindling wilderness areas of the United States.

SASHA SIEMEL

UMI

Simón Bolívar, "The Liberator." It was the first community in the southern continent to rid itself of Spain's rule, a triumph won in 1821 after a ten-year fight. Instead of "White House," Venezuelans refer to the President's mansion there as the "Yellow House."

Improvement in farming methods is another part of the development program, and the agriculture problem puts oil wealth in a different light. Coffee, cacao, and beans are grown, but the country does not raise enough food for the people within its 352,140 square miles. Farm workers are attracted by better pay in oil field or other jobs. Hence food must be bought elsewhere. Transportation expenses plus prices make the cost of living high. It takes $7 to buy dinner at a good restaurant. Clothing costs about twice as much as in New York.

Columbus Was Here—Columbus first sighted the shores of Venezuela on the north coast of South America in 1498. But it remained for a later explorer, Alonzo de Ojeda, to name it. Seeing the huts of the natives built on stilts above the swampy shores of Lake Maracaibo, he called it "Little Venice," or Venezuela. Above these waters now rise the towering, stiltlike derricks of Venezuela's Number One oil field.

To assure shipments of oil reaching world markets quickly, a huge dredging operation is being carried out to open and deepen the channel between Lake Maracaibo and the Caribbean. This will allow large ocean-going tankers to load at the field rather than await transshipment from smaller vessels at Aruba, a small Netherlands island off the coast.

Some Like It Hot, Some Like It Cold—Coastal areas, as well as the interior lowlands, are hot, for Venezuela lies entirely within the Torrid Zone. No part of the country is more than thirteen degrees north of the Equator. Yet its climate ranges from tropical to arctic cold. Some visitors prefer warmer sports—others, skiing in the mountains. The Pan American Highway crosses the Andes at heights of over 13,000 feet and the country's highest point is 16,411-foot La Columna peak.

The Orinoco River, 1,700 miles long, drains four-fifths of the country. Broad, low plains border it. There, in early days, vast herds of cattle roamed. They were tended by cowboys said to have been even tougher and more independent than Argentine "gauchos" or rugged cowpunchers of early Western days. There is talk of a possible revival of the cattle industry. The country also has gold, copper, and other minerals to exploit.

References—Venezuela is shown on the National Geographic Society's map of South America. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

See also, "Search for the Scarlet Ibis in Venezuela," in *The National Geographic Magazine*, May, 1950; "Jungle Journey to the World's Highest Waterfall," November, 1949; "Caracas, Cradle of the Liberator," April, 1940 (out of print; refer to your library); "I Kept House in a Jungle," January, 1939; and, in the GEOGRAPHIC SCHOOL BULLETINS, January 26, 1953, "Colombia and Venezuela Settle Islets' Title"; "Orinoco Cuts Jungle Path to Venezuela's Iron," January 21, 1952; "Maracaibo Gave Venezuela Name and Fortune," February 19, 1951; and "Venezuela May Prove Land of Hope for DP's," February 20, 1950. *(Issues of The Magazine not more than 12 months old are available to schools and libraries at a specially discounted price of 50¢ a copy. Earlier issues sell for 65¢ a copy through 1946; $1.00, 1930-1945; $2.00, 1912-1929. Write for prices of issues prior to 1912.)*

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UMI

RUTH ROBERTSON

Venezuela's Indians Stick to Old Ways and Old Weapons—Poison, and bow and arrow are fishing paraphernalia in this jungle hinterland far from the country's thriving industrial activities and busy highways. Poisonous juice pounded from bundles of barbasco, dumped in the pool, stupefy the fish. Floating to the surface, small ones are netted, large ones finished off with bow and arrow in truly primitive style.

Bulletin No. 1, January 11, 1954

Iron Teams with Oil to Enrich Venezuela

Venezuela has been pouring out huge quantities of petroleum to serve a world heavily dependent on gasoline and oil. This month it begins the first shipments of high-grade iron ore which as steel eventually will be going into engines and vehicles powered by its fuel.

As fabulous as the nation's store of "liquid gold" is the iron-ore mountain located at Cerro Bolívar, a 2,018-foot peak in the eastern part of the country. Initial estimates are that it holds some 500,000,000 tons of easily mined native metal.

The ore's quality surpasses even that of Minnesota's Mesabi Range where reserves are dwindling. This explains why Venezuela's ore is coming to the United States, whose steel companies have been searching for handy new sources of this vital raw material.

Oil a Mixed Blessing—Venezuela sells more petroleum than any one except Uncle Sam. It has made this nation of 5,000,000 people rich. Oil income has been financing an impressive public works and development program. Projects include a $60,000,000-multilaned speedway between Caracas, the capital, and its port, La Guaira, which will cut travel time by more than two-thirds.

A modern, expanding city of 700,000, Caracas gave South America

son is never closed in salt or fresh waters. Wild fowl and game lure the huntsman. Tradition and legend lie heavily on the land and many come to admire the fine white porticoed homes, some set amid great trees dripping pendants of Spanish moss (illustration, back cover).

From December until May the State wears its brightest garlands of flowers—azalea, magnolia, and jasmine, the State flower. Tourists flock to Charleston to admire the glory of its gardens. The 70,000 citizens are hosts to thousands during the Azalea Festival in April.

New and Old Mingle—Charleston, where modern buildings rub elbows with those erected centuries ago, has lost two distinctions. Columbia, more centrally located inland, replaced it as State capital in 1786. It has now taken first place in population, with 87,000.

Today's Charleston seems remote from the port of 1861 whose shore batteries started the Civil War when they opened fire on Fort Sumter. It is preoccupied with its industries and commerce. It boasts $30,000,000 in port terminal facilities, a Navy Yard, airport, and the imposing John P. Grace Memorial Bridge over the Cooper River.

The Cooper River on the city's north and the Ashley on its south are little more than tidal estuaries. Proud citizens, however, have an old saying that here these rivers "meet to form the Atlantic Ocean."

References—South Carolina is shown on the Society's map of Southeast U. S. For additional information, see "South Carolina Rediscovered," in *The National Geographic Magazine*, for March, 1953; "Dixie Spins the Wheel of Industry," March, 1949; and "Charleston: Where Mellow Past and Present Meet," March, 1939.

Asterisks Mark South Carolina's Giant Footnote to History—Near Aiken, the Atomic Energy Commission's Savannah River Plant processes materials that may serve man or destroy him. Great advances in medicine, science, and industry are peacetime goals now sought. Yet these same materials, if need be, can enter into A- or H-bombs or other awesome munitions for the defense of the United States.

UNITED PRESS PHOTO

UMI

Bulletin No. 2, January 11, 1954

Imagination Sparks South Carolina's Growth

Blackbeard, the dread pirate, once roamed the coasts of South Carolina and threatened to burn Charleston, then as now its main seaport. If he returned as a ghost today, he would fume at the wealth that escaped his clutches.

He would be a confused man, too, because the State's greatest treasures in natural resources are dirt and water. He would be worse confounded to learn that his most thunderous broadside would sound like a cap pistol compared with the explosive blast chained in the tiny particles of matter being processed at the Savannah River Atomic Energy plant near Aiken.

Industry Overtakes Agriculture—The Palmetto State, as it is known, was once mainly agricultural. Now its industrial products bring in twice as much money as the output of farms. Imagination plays a key role in both fields.

Back in 1690, the captain of a ship in the Orient trade touched at Charleston and gave a small bag of Madagascar rice to a local planter. The rice flourished so fabulously that for more than a century and a half the crops accounted for much of the State's wealth. Next a woman succeeded in cultivating indigo, another plant of the Far East, and the colony reaped a new bounty. There was a big European demand then for the blue dye made from indigo roots.

These crops gave way to cotton, tobacco, peaches, corn, hay, oats, sweet potatoes, and peanuts. Cotton is still the "king" money crop, bringing in $142,000,000, or almost a third of the farm income, according to the last figures available. These show the State in Number Four place among tobacco-growing States. Shrimp and crab add wealth.

South Carolina realized at the start of the present century that rivers which laced its fertile soil could be harnessed for work in an industrial world. Today massive dams supply the electricity which keeps industry humming. Three out of four plants make textiles, hence the State leads the country in the manufacture of finished woven cottons.

Under Five Flags—Spain first planted a colony on this inviting shore in 1526 but soon abandoned it. A settlement of French Huguenots, begun in 1652, also was short-lived. Britain's banner waved until replaced by the Stars and Stripes when Independence was won. During the Civil War the Stars and Bars of the Confederacy became the emblem until Old Glory returned with peace.

South Carolina's historical tapestry is rich, but it is only one of the attractions this State of more than two million people offers visitors in the 31,055 square miles within its borders.

A guest may even have a choice of weather. The coastal and midland areas are a favorite with winter vacationists because they enjoy a climate ranging from subtropical to mild. Westward among the mountains, the hardy, out-of-doors individual can find temperatures which dip below zero and snow that may tarry a few days.

Along the Atlantic stretch many fine beaches. The fishing sea-

aircraft and supplies shuttled across the South Atlantic when Axis forces threatened to overrun North Africa and gain control of the continent.

Natives worked with sweltering GI's and got their introduction to jeeps, bulldozers, prefabricated houses, refrigerators, air conditioning, and even soft drinks and hamburgers. GI's were impressed to find large cities—Accra, whose population now is about 135,000; Kumasi, 78,000; and Sekondi-Takoradi, another air site, with some 45,000.

Education Spurs Progress—Education has come to the fore. Approximately 300,000 children now attend primary schools for six years, and the government hopes to increase their number. Schools for advanced study and vocational training also are available.

Knowledge acquired by the younger generation will be essential to develop the great wealth of the country. Already it is second only to Russia in producing manganese, vital in steel making and other manufactures. Cacao exports account for two-thirds of the world's supply. Enormous reserves of aluminum ore exist. Other resources to be exploited include gold, diamonds, hardwoods, and rubber trees.

Setting an example of learning's value is Premier Kwame Nkrumah, a graduate of Lincoln University, Pennsylvania. Sons and daughters of other native families have studied in England and come back well trained doctors, lawyers, and specialists in other fields.

The government now is administered by the Cabinet, made up of three Britons and seven Africans. The Premier presides. Non-Africans in the colony total less than 7,000. British officials are fostering the advance toward statehood, hoping the achievement will show the world how a colony can intelligently find freedom's road in non-communist regions.

To help the Gold Coast pay its way, a four-year harbor improvement has been completed at Takoradi, another such project is under way at Tema, sixteen miles east of Accra. A big hydroelectric dam is planned for the Volta River so an aluminum industry can be built up. Mechanization has made its debut in the mines.

Old Chiefs Cautious—Some elders and chiefs, who cling to ancestral ways, view the dynamic program with less than fervor. Many a chief still travels in traditional panoply, borne in a sedan chair and accompanied by sword bearers, fan wavers, umbrella holders (illustration, above), magicians, and minstrels singing his glory. Most important are those who carry the ornamental stool, symbol of authority.

Some stools are gold, silver, mahogany, or brass studded, others are very plain. Tribal lands are known as stool lands. Accra's newspaper told the outcome of an important 1952 election with the screaming headline: EISENHOWER GETS WHITE HOUSE STOOL.

The tepid attitude of some chiefs has made little dent in Dr. Nkrumah's popularity. A bachelor, he courts female voters. "Every woman in the Gold Coast is my bride," he said in one burst of oratory. His party received ninety per cent of the votes in the election.

References—The Gold Coast may be located on the Society's map of Africa.

For additional information, see "Hunting Musical Game in West Africa," in *The National Geographic Magazine* for August, 1951; and, in the GEOGRAPHIC SCHOOL BULLETINS, February 9, 1953, "Gold Coast Water Power to Process Aluminum"; and "Africa's Gold Coast Exports More than Gold," April 17, 1950.

UMI

ACME

The Red Carpet Is Out for a Visiting King—Attired in a gold-brocaded silk robe draped like a Roman toga, an Ashanti tribal king pays his respects to the Gold Coast Governor. The plumed hat and gold-laced uniform of this representative of Queen Elizabeth rival in splendor the native costumes.

Bulletin No. 3, January 11, 1954

Gold Coast Approaches Independence

The fabled Gold Coast, once the haunt of adventurers who trafficked in gold, slaves, and ivory, is moving toward the dignity of nationhood under a widely acclaimed leader educated in the United States.

In the past three years, this rich country has made rapid strides in self-government. Now it seems likely to become the first of Britain's present African colonies to achieve the status of a free dominion in the commonwealth of nations sharing allegiance to Queen Elizabeth II.

Called an area of light in the Dark Continent today because of its progress, the Gold Coast is tucked in on the underside of the big western bulge Africa shoulders into the Atlantic Ocean. Its area, almost 92,000 square miles, is roughly equal in size to the United Kingdom. A population close to four and a half million approximates the count for Massachusetts in the last census.

Known Before Columbus—Ten years before Columbus discovered the New World, the Portuguese established the first settlement there. Dutch and British traders soon followed. It was 1871 before the Gold Coast became a recognized English colony.

The impact of the United States on the colony's traditional way of life came late but with great influence in World War II. GI's transformed the plain adjacent to Accra, the capital, into the main base for

playful otter than a big cat. It is not nearly as well known as other American felines. Sleek, unspotted, seldom over four feet long, jaguarundis are either rusty red or smoky gray, being two-color, or dichromatic creatures. They are sometimes called "otter cats."

Very few of these elusive creatures are ever seen. Twisting and climbing through thickets which less lithe animals could not penetrate, they live on birds, rabbits, mice, and rats. They are monarchs of their thorny kingdom. It is possible that there are more of them in this one region than those occasionally sighted would indicate.

It is the mountain lion, rather than such jungle cats, that most Americans associate with their own country. Scientifically known as *Felis concolor* (Latin for cats of similar color), these creatures fight encroaching civilization, and with some success.

References—For additional information on the wild cat family, see "King of Cats and His Court," in *The National Geographic Magazine*, February, 1943; and "The Jungle Was My Home," by Sasha Siemel, November, 1952.

Puma Could Give Tarzan Pointers—Muscles rippling under tawny coat, this cat of many names braces forelegs for a landing. Also called the "American lion," it ranges from the Peace River district of western Canada, south to the Strait of Magellan.

PAUL J. FAIR

Bulletin No. 4, January 11, 1954

Big Cats Prowl Shrinking Wilds of U.S.

Some wild American cats spend their lives in circus cages while barkers ballyhoo their ferocity. Others behind zoo bars are objects of timid curiosity. Despite the way the growth of population and industry in the United States has been penetrating remote regions, however, there remain lingering wilderness areas and a few patches of unfrequented land which members of this feline family still call their own.

In mesquite thickets along the Rio Grande and in the lonely mountains of southern New Mexico and Arizona, the jaguar, ocelot, and jaguarundi still roam. But their last hunting grounds are shrinking.

Mountain lions have practically vanished east of the Mississippi, except in the Florida Everglades. The lynx has been retreating steadily northward. Now it prowls only the most remote forest lands of upper New England and the Adirondacks in northern New York State.

Native Felines Have Many Aliases—Members of the cat family *(Felidae)* native to the United States are bobcat, jaguar (illustration, cover), jaguarundi, lynx, ocelot, and puma. Some of them have many common names. Generally called "mountain lion" in the eastern United States, the puma is more or less well known under nineteen names. Cougar, panther, catamount, and king cat are only a few of them.

Of the half dozen American cats, only the wild and ferocious bobcat still inhabits the mid-continent from coast to coast. Naturalists report that this long-legged, short-tailed cousin of the lynx has increased in numbers in recent years. Because of its vicious temper when annoyed, it is popularly termed "wildcat."

Largest and rarest of all within this country's borders is the brawny jaguar with its leopard spots. Though once it ranged as far north as the Grand Canyon, and west to southern California, today only an occasional hungry wanderer crosses from Mexico to the mesas and forested hillsides of the border country.

A jaguar skin displayed at the University of Arizona at Tucson measures seven feet four inches from nose to tail tip. Such a cat has enough strength to break the neck of a horse or ox at one leap and drag it away to devour. Fortunately, jaguars so far north have never been known to attack a man unless attacked first. But caged jaguars are rated by circus trainers as extremely dangerous and unpredictable.

Ocelots Take to Domesticity—By contrast with jaguars, ocelots are almost friendly. They tame easily, even becoming household pets, in spite of their wild jungle markings and nicknames of "tiger cat" and "leopard cat."

A creature of the Tropics, the ocelot penetrates the United States only in the broiling, brush-choked lower valley of the Rio Grande in Texas. Once numerous, they have almost disappeared in recent years as their wild, protective underbrush has been cleared for new farms.

In the remaining Texas wilderness of tangled thorn wood and mesquite lives the mysterious jaguarundi. This animal is more like the small,

The mutineers' paradise remained unknown until 1808 when a Yankee sea captain logged the isle and wrote the British Admiralty. The only surviving mutineer then was the aged John Adams. He was never prosecuted. By 1856 the population had grown to a surprising 192! Pitcairn's resources, it was decided, could not support such a number. Everyone was shipped to faraway Norfolk Island, 400 miles northwest of New Zealand.

Paradise Regained—More than six times Pitcairn's size, Norfolk offered fertile soil and timber, but forty descendants of the mutineers soon were pining for their old home and made their way back.

On Pitcairn money never has been plentiful. Even in recent years the top official's salary was $65 a year. In 1938 a United States aluminum company set up an exposure station to test reaction of various alloy samples to tropical conditions and corrosive sea spray. They sought an islander to supervise a ten-year program. British authorities approved a well-to-do native but said his pay must not be too high for existing standards. Five dollars a year was agreed upon. Better-grade kitchen utensils are now produced, thanks to data developed by the program.

Considering how rare the dollar, imagine how Pitcairners reacted a few years back to news that they had $130,000 in the bank, accumulated by the sale of stamps to collectors the world over. What to do with this fortune? Britain's High Commissioner for the area suggested that if they built a school, the British would take care of its future expenses.

Education has been a "sometime thing" on Pitcairn. The first informal classes were conducted by Midshipman Edward Young, a mutineer, but he died in 1800. John Adams, an all but illiterate seaman, took up the task, laboriously teaching himself first. Before this last of the mutineers died in 1829, two Englishmen arrived and took over instruction.

No Ten O'Clock Scholars—Children between the ages of six and 16 had to attend classes more than a century and a half ago, although much more advanced countries did not require compulsory attendance until long afterward. A sleepy-head Pitcairn student would have had a bad time in those days when school hours ran from 7 a. m. until noon.

Discovery that postage stamps had provided money for a modern school came at a time when island children, without trained teachers for years, were forgetting English and lapsing into a corrupt dialect. "Bou' y' bin," for example, meant "About where are you going."

Some 25 children registered when the new school opened, among them Fletcher Christian, six generations removed from his mutinous namesake and forebear who led the mutiny. Young, Adams, and the other amateur instructors of yore never dreamed that a school's equipment would include electricity and such aids as radios, movie films, and projectors.

References—Pitcairn Island may be located on the Society's map of the Pacific Ocean, on which it appears in a large-scale inset.

For further information, see "The *Yankee's* Wander-world," in *The National Geographic Magazine* for January, 1949; and "Westward Bound in the *Yankee*," January, 1942 (out of print; refer to your library).

See also, in the GEOGRAPHIC SCHOOL BULLETINS, October 29, 1951, "Postage Stamps Mark Pitcairn's Progress."

UMI

CAPTAIN IRVING JOHNSON

Thatched Roofs Shelter Pitcairn Craft—This rock-fringed strip of beach on Bounty Bay is one of the only two landing places on harborless Pitcairn Island. The boat on the log ramp, built by the islanders, was patterned after the old New Bedford whaleboats. Pitcairn's storied remoteness is now at an end since regular commercial radio communication has reached the hideout of the 1790 *Bounty* mutineers.

Bulletin No. 5, January 11, 1954

The Pitcairn Story Continues to Grow

Few true tales of the sea match the mutiny aboard *H. M. S. Bounty* in 1789. Its aftermath brought fame to tiny Pitcairn Island, selected by nine of the mutineers as the uninhabited hideaway where they might live out their lives beyond the reach of British justice.

Interesting bits of the Pitcairn story continue to come to light. Postage stamps built the first regular schoolhouse on the volcanic isle nestled in the blue Pacific almost 4,000 miles southeast of Hawaii. Because of Pitcairn, factories in the United States make better pots and pans. At one time all the inhabitants left, but homesickness brought enough back for a new start.

No Crowding—Pitcairn's present population is placed at 130 persons and they have only 1.9 square miles wherein to dwell. By many standards, this is not overcrowding, but an attempt is made to keep each family as self-sufficient as possible on the small acreage of productive land. Chief exports are oranges and pineapples. For home consumption, the islanders grow coffee, beans, sugar cane, yams, taro, melons, and bananas. Flour and other foodstuffs must be brought in.

Most Pitcairners are descended from the mutineers who sailed the *Bounty* there in 1790, then burned the ship to show they intended to stay. The *Bounty* had previously touched at Tahiti where several Polynesian women boarded to become wives of the mutineers.

ROBERT F. SISSON

Moss-hung Oaks Impart an Air of the Old South

The stately house, built in modern times, replaces an earlier dwelling on this 17th century plantation near Charleston, South Carolina (Bulletin No. 2).

The avenue of live oaks, planted in 1843, lends both shade and dignity.

More than 200 species of oak are known, some 75 being found in the United States. The live oak is found in southern States, usually not more than 50 or 60 miles inland from the Gulf of Mexico or equivalent warm coastal waters.

The Spanish moss hanging from the trees was widely used for cushions and mattresses before the advent of foam rubber. The downy drapery belongs to the same plant family as the prickly pineapple.